



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,613	08/11/2005	Helge Wessel	272978US0PCT	4701
22850	7590	03/25/2010		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
VANOT, TIMOTHY C				
ART UNIT		PAPER NUMBER		
1793				
NOTIFICATION DATE		DELIVERY MODE		
03/25/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

### Office Action Summary

**Application No.**

10/539,613

**Applicant(s)**

WESSEL ET AL.

**Examiner**

TIMOTHY C. VANOS

**Art Unit**

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/IC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 08-11-2005 & 06-17-2005

**DETAILED ACTION**

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Pat. 5,003,107 to Zimmerman et al.

The abstract of the Zimmerman patent describes an catalyst containing, on an oxide-free basis, about 70 to 75 weight percent nickel (Group VIII metal); 20 to 25 weight percent of copper (Group IB metal); 0.5 to 5 weight percent chromium (Group VIB metal) and 1 to 5 weight percent of molybdenum (Group VIB metal).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The person having ordinary skill in the art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. 5,985,227 to Immel et al.

Example 2 in the Immel patent describes the production of a catalyst that made by impregnating 200 grams of alumina with a solution containing 3.71 grams of  $\text{Cu}(\text{CH}_3\text{COO})_2 \cdot \text{H}_2\text{O}$ ; 3.14 grams of  $\text{Fe}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$  and 4.31 grams of

$\text{Zn}(\text{CH}_3\text{COO})_2 \cdot 2\text{H}_2\text{O}$  in 80 grams of water. The impregnated alumina was then dried for 18 hours at 100 oC, and the resulting dried alumina was then impregnated with a solution containing 2.06 grams of  $(\text{NH}_4)_6\text{Mo}_7\text{O}_2 \cdot 4.4\text{H}_2\text{O}$  in 70 grams of water. The resulting alumina was dried for 18 hours and then heated for 4 hours at 400 oC.

The resulting catalyst was used to remove sulfur compounds such as COS, CS<sub>2</sub> and mercaptans out of industrial gases such as natural gas (please see col. 3 Ins. 5-9). The desulfurization of the industrial gas was conducted at a temperature of 20 to 150 oC (please see col. 3 Ins. 25-27).

The difference between the Applicants' claims and Example 2 in the Immel patent is that Applicants' claims 1 and 7 sets forth that the catalyst comprise from 5 to 70 percent by weight of the copper, silver, zinc, molybdenum, iron, cobalt, nickel or mixtures of these metals, whereas it is clear from Example 2 in the Immel patent that the resulting impregnated alumina appears to contain less than 5 percent by weight of the **total** of the copper, iron, zinc and molybdenum.

However, col. 2 Ins. 34-39 in the Immel patent discloses that the inorganic support is impregnated with **each** (emphasis added) of the metal oxides in a quantity of from about 0.05 to 4 percent by weight. *(Therefore, Immel envisioned and embraced embodiments where the total weight percent of the combination of the copper, iron, zinc and molybdenum of his Example 2 can be present in a maximum quantity of 16 percent by weight relative to the alumina support, which is not distinct from the 5 to 70 weight percent limitation of Applicants' claims 1 and 7).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made *to have modified* the process of making the catalyst set forth in Example 2 in the Immel patent *by increasing* the amount of the copper, iron, zinc and molybdenum such that the resulting alumina support contains a grand total of 16 weight percent of the copper, iron, zinc and molybdenum, in a manner that meets the 5 to 70 weight percent limitations in Applicants' claims 1 and 7, **because** col. 2 lns. 34-39 in the Immel patent discloses that **each** of the catalytic metal oxides supported on the inorganic support may be present in quantities of up to 4 percent by weight (4 wt. % of copper oxide; 4 wt. % iron oxide; 4 wt. % zinc oxide and 4 wt. % molybdenum oxide make for 16 weight percent of the metal oxides in grand total). Additionally, note that the courts have already determined such an overlapping portion of a prior art reference's range and a claimed range is *prima facie* obvious: please note the discussion of the *In re Wertheim* 541, F.2d, 257, 191 USPQ 90 (CCPA 1976) court decision set forth in section 2144.05(I) in the MPEP.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY C. VANOY whose telephone number is (571)272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Timothy C Vanoy  
Primary Examiner  
Art Unit 1793

tcv

/Timothy C Vanoy/  
Primary Examiner, Art Unit 1793